

CLAIMS

1. A stripe-line inductor comprising one or more stripe-line conductor turns fabricated into one or more layers of a carrier substrate (10), **characterized by**

5 a stripe-line conductor of the inductor consisting of two or more parallel and/or overlapping sub-stripe-lines (31-32, 41-42, 51-52, 61-68, 74-77, 81-84, 91-94, 110-113, 120-123) connected together at their ends, and

the order of the parallel and/or overlapping sub-stripe-lines being changed (59) at least once during the total length of said stripe-line conductor.

10 2. An inductor as claimed in claim 1, **characterized by**

the order of the sub-stripe-lines (51-54) being arranged to change in such a point of the stripe-line conductor that electromotive forces induced in the loops of the sub-stripe-lines before the change point (59) and the electromotive forces induced in the loops of the sub-stripe-lines after the change

15 point substantially cancel out each other.

3. An inductor as claimed in claim 1 ~~or 2~~, **characterized** in that the order of the sub-stripe-lines is reversed.

4. An inductor as claimed in claim 1, ~~2 or 3~~, **characterized** in that all stripe-line conductor turns (61-68, 74-77, 81-84, 91-94) of the inductor are in the same layer on the carrier substrate (10), and that the order of the sub-stripe-lines is changed by coupling wires (73, 85-88, 97-100) in the second layer.

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5. An inductor as claimed in claim 1, ~~2 or 3~~, **characterized** in that the stripe-line conductor turns (110-113, 120-123) of the inductor are in two or more layers on the carrier substrate (10), and in that the order of the sub-stripe-lines is changed by lead-ins (114A-D; 117-D) between the layers.

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6. An inductor as claimed in ^{claim 1} ~~any one of claims 1-5~~, **characterized by**

a first set of parallel sub-stripe-lines (51-54, 61-64, 110-113) in which the sub-stripe-lines are connected together at their first end (45, 69, 115),

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a second set of parallel sub-stripe-lines (51-54, 65-68, 120-123) in which the sub-stripe-lines are connected together at their first end (46, 71, 116),

35 second ends (59, 70, 114A-D) of the first set of sub-stripe-lines being connected to second ends (59, 72, 117A-D) of the second set of sub-

stripe-lines in such a manner that the order of the sub-stripe-lines changes.

7. An inductor as claimed in claim 6, **characterized** by the first and second set both comprising N sub-stripe-lines, the order of the first and the second set is connected to reverse in such a manner that sub-stripe-line i in the first set is connected to sub-stripe-line [N - (i - 1)] in the second set where i = 1, ... N and N = 1, 2, ...,

8. An inductor as claimed in claim 6 ~~or 7~~, **characterized** by the first (61-64) and the second (65-68) set of sub-stripe-lines being within each other in the same layer of the carrier substrate (10).

9. An inductor as claimed in claim 6 ~~or 7~~, **characterized** by the first (110-113) and the second (120-123) set of sub-stripe-lines being in different layers of the carrier substrate.

10. An inductor as claimed in claim 6, ~~7, 8 or 9~~, **characterized** by comprising three or more sets of sub-stripe-lines connected in series in such a manner that the order of the sub-stripe-lines is changed in every connection point between the sets.

11. An inductor as claimed in ^{claim 1} ~~any one of the previous claims~~, **characterized** by being fabricated by thin film technique, thick film technique, fabrication technique of integrated circuits, printed circuit board technique, deposition technique or any other corresponding technique.